Clean Air Facts

Secondary Aluminum MACT Appendix B - Scrap Dryer/ Delacquering Kiln/ Decoating Kiln

SBCA-ALM3-0902

Scrap Dryer/ Delacquering Kiln/ Decoating Kiln

The scrap dryer/ delacquering kiln/ decoating kiln (SDDK) refers to units that remove coatings and various organic contaminants such as oil, paint, lacquer, ink, plastic, and/or rubber from aluminum scrap - including used beverage containers - prior to melting. The process usually heats the scrap to around 1000°F.

Emission Limits & Operation Standards

Each unit may not have emissions of dioxin/furan toxic equivalents (D/F TEQ) greater than 3.5 x 10^{-6} grains per ton (gr/ton) [0.25 micrograms per megagram (µg/Mg)] of feed/charge. Alternatively if a SDDK is equipped with an afterburner, the unit can meet an alternate limit of 7.0 x 10^{-5} gr/ton [5.0 µg/Mg] of feed/charge.

The owner/operator must label each unit with the following information:

- ✔ type of unit
- ✔ emission limit and operational standard that applies
- ✔ control method used
- ✔ operating parameters (such as charge used; afterburner temperature and design residence time)

They must inspect the labels once per month. A device that records the weight of each charge or production batch must be installed, operated, maintained and calibrated according to the Operation Maintenance & Monitoring (OM&M) plan. Refer back to the main Secondary Aluminum MACT standard fact sheet for details on the OM&M plan.

When fabric filters or afterburners are used to meet emission limits they must also meet the following conditions:

- ✔ Maintain operating temperature as established in performance test (fabric filter may be less than temperature in test, +25°F).
- ✔ Operate the unit according to OM&M plan.
- ✔ Initiate corrective action when process or operating parameters deviate from those established in OM&M plan.
- ✔ For continuous lime injection, maintain free flowing lime in hopper at all times and maintain feeder setting at same level established during performance test.

Compliance Demonstration

Each control device/method used will have its own requirements for demonstrating compliance. Refer back to the main Secondary Aluminum MACT standard fact sheet for details on general compliance demonstration requirments for: capture and collection systems, feed/charge rate measurement devices, the OM&M and SSM (Startup, shutdown and malfunction) plans, notifications/reports and records. Only those requirements unique to the SDDK will be included here.

Fabric Filters and Lime-injected Fabric Filters

When a fabric filter is used to meet the emission limit, the owner/operator must install, calibrate, maintain and operate a bag leak detection system or continuous opacity monitoring system (COMS). If the leak detection system is other than a COMS, the system must be equipped with an alarm to indicate when a leak occurs. They must initiate corrective action within 1 hour of the alarm. The fabric filter must be operated such that the alarm sounds less than 5% of the operating time. The unit must be inspected annually and records kept of each inspection and any corrective action taken. Also, records of total operating time and time of alarms must be kept.

The inlet temperature to the fabric filter should be measured continuously and recorded every

15 minutes. Determine and record 15-minute block averages and 3-hour block average temperatures. Also record excursions from the appropriate operating values for inlet temperature, the cause and any corrective action taken.

For a lime-injected fabric filter, the owner/operator must maintain free flowing lime in hopper or silo at all times. The feeder setting/injection rate must be operated within range established during the performance test.

Afterburners

The owner/operator must continuously monitor and record the temperature of the afterburner. Install the temperature monitoring device at the exit of the combustion zone and calibrate the temperature according to NIST reference methods.

Operate the afterburner temperature at or above the temperature established in performance test. Determine and record 15-minute block average and 3-hour block average temperatures. Record any excursions from the required operating range, and the cause and any corrective actions taken.

Inspect the afterburner annually and operate it according to the OM&M plan. Keep records of each inspection and any corrective actions taken. Note whether any corrective actions did not follow the OM&M plan.

Performance Testing

An initial performance test is required **by March 23, 2003** to demonstrate that each emissions unit or control device can meet the level of emissions required in the limit. A repeat performance test will be required every five years following the initial test. You must submit a test plan 60 days prior to the date the test is scheduled. The plan should outline the test methods and procedures to be followed.

Each performance test for demonstrating compliance with D/F emissions limits shall include USEPA Methods 1-4 and 23. The following methods shall also be used during each performance test:

- ✔ each test must be performed at the outlet of the emissions unit or control device;
- ✔ each test must be performed at the highest capacity of the process with charge materials representative of the range of materials processed;
- ✔ for a continuous process the test must consist of 3 runs, each of the length specified in the test method or, if not specified, a minimum of 3 hours;
- ✔ for a batch process the test must consist of 3 runs, each conducted over the entire process operating cycle;
- ✔ for multiple units exhausted through a common stack, each run must be conducted over a period of time during which each of the units completes at least one entire operating cycle or for 24 hours, whichever is shorter;
- ✔ for each afterburner, the temperature must be continuously monitored at the exit of the combustion chamber and recorded every 5 minutes during the test;
- ✔ for each fabric filter, the temperature must be continuously monitored at the inlet to the device and recorded every 15 minutes during the test;
- ✔ the temperature of the afterburner must be maintained at or above 1400°F in each 3-hour block testing period;
- ✔ establish minimum/maximum operating parameter values during the performance test.

Notifications & Reports

Refer back to the main Secondary Aluminum MACT standard fact sheet for details on the notifications and reports due under this rule.

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Contacts for More Information or Assistance.

The Small Business Clean Air Assistance Program helps smaller businesses understand and comply with the Clean Air Act regulations. Contact one of the program's Clean Air Specialists for more assistance: Renée Lesjak Bashel at 608/264-6153 or Tom Coogan at 608/267-9214.

SMALL BUSINESS ASSISTANCE PROGRAMS
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For further information on the Secondary Aluminum MACT contact your DNR Regional or Service Center office shown on the **DNR Contact Fact Sheet** available from SBCAAP.